



ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
MAY 10, 2007 – 9:00 A.M.
MULTI-MODAL CONFERENCE ROOM

Present: L. Tibbits J. Friend J. Polasek
J. W. Reincke M. Van Port Fleet J. D. Culp
T. Anderson C. Roberts T. Fudaly
C. Bleech E. Burns

Absent: B. O'Brien

Guests: D. Thompson

OLD BUSINESS

1. **Approval of the April 5, 2007, Meeting Minutes – L. Tibbits**

The April 5, 2007, meeting minutes are approved.

NEW BUSINESS

1. ***Guidelines for Traffic Safety Planning and Traffic Control in School Areas – D. Thompson***

The previous guidelines were developed and published in July 1978. The revised guidelines incorporate changes in traffic control per the latest edition of the *Michigan Manual on Uniform Traffic Control Devices*, and the *Michigan Vehicle Code*. The School Trip Safety Program has been expanded from 5 to 22 pages incorporating additional information from ITE. This information includes who should be involved on a School Traffic Safety Committee, various traffic studies, and potential solutions.

ACTION: EOC approves the revised Guidelines for Traffic Safety Planning and Traffic Control in School Areas pending minor editorial corrections. The Traffic and Safety Division will send out a memo for the guidelines and provide assistance.

2. **Pavement Selections – B. Krom**

a. **US-41/M-28 Reconstruction: CS 52041, JN 80145**

The reconstruction alternates considered were a hot mix asphalt (HMA) pavement (Alternate 1 – equivalent uniform annual cost [EUAC] \$28,785/mile) and a jointed plain concrete pavement (Alternate 2 - EUAC \$40,892/mile). A life cycle cost analysis was performed and Alternate 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

1.5" HMA, 5E3, Top Course (mainline)
2" HMA, 4E3, Leveling Course (mainline)

2"	HMA, 4E3, Base Course (mainline)
1.5"	HMA, 5E03, Top Course (shoulders)
2"	HMA, 4E03, Leveling Course (shoulders)
6"	Aggregate Base (mainline)
8"	Aggregate Base (shoulders)
18"	Sand Subbase
6" dia.	Underdrain System
29.5"	Total Section Thickness

Present Value Initial Construction Cost.....	\$443,681/mile
Present Value Initial User Cost.....	\$30,540/mile
Present Value Maintenance Cost	\$89,985/mile
Equivalent Uniform Annual Cost	\$28,785/mile

b. I-196 Rehabilitation and Reconstruction: CS 41029, JN 75069 and 46274

The rehabilitation alternates considered were a HMA over rubblized pavement concrete (Alternate 1a – EUAC \$110,243/directional mile) and a separated jointed plain concrete pavement overlay (Alternate 2a – EUAC \$90,477/directional mile). The reconstruction alternatives considered were a HMA pavement (Alternate 1b – EUAC \$160,110/directional mile) and a jointed plain concrete pavement (Alternate 2b – EUAC \$163,560/directional mile). A life cycle cost analysis was performed and Alternates 2a and 2b were approved based on having the lowest combined EUAC (2a and 2b: \$119,710/directional mile; 1a and 1b: \$130,190/directional mile). The pavement design and cost analysis are as follows:

Alternative 2a (60 Percent of the Project) Rehabilitation: Unbonded Jointed Plain Concrete Overlay

6"	Jointed Plain Concrete w/12' joint spacing
1"	HMA Separator Layer
9"	Repaired Existing CRCP (mainline)
	Existing Base and Subbase (mainline and shoulders)
18"	PDS Underdrain System
7"	Total Thickness

Present Value Initial Construction Cost.....	\$415,227/directional mile
Present Value Initial User Cost.....	\$941,765/directional mile
Present Value Maintenance Cost	\$37,708/directional mile
Equivalent Uniform Annual Cost	\$90,477/directional mile

Alternative 2b (40 Percent of the Project) Reconstruction: Jointed Plain Concrete Pavement

10.5"	Jointed Plain Concrete w/14' joint spacing
6"	Aggregate Base, Modified
10"	Sand Subbase
6" dia.	Subbase Underdrain System
26.5"	Total Thickness

Present Value Initial Construction Cost.....	\$1,067,315/directional mile
Present Value Initial User Cost.....	\$1,744,168/directional mile
Present Value Maintenance Cost	\$112,477/directional mile
Equivalent Uniform Annual Cost	\$163,560/directional mile
Combined Equivalent Uniform Annual Cost.....	\$119,710/directional mile

(Signed Copy on File at C&T)

Eric Burns for Brenda J. O'Brien, Secretary
Engineering Operations Committee

BJO:EB:kar

cc:	K. Steudle	S. Mortel	J. Steele (FHWA)
	J. Shinn	D. Jackson	R. Brenke (ACEC)
	L. Hank	W. Tansil	G. Bukoski (MITA)
	EOC Members	D. Wresinski	D. DeGraaf (MCPA)
	Region Engineers	C. Libiran	D. Hollingsworth (MCA)
	TSC Managers	R. J. Lippert, Jr.	J. Becsey (APAM)
	Assoc. Region Engineers	T. L. Nelson	M. Newman (MAA)
	T. Kratofil	T. Phillips	J. Murner (MRPA)
	M. DeLong	K. Peters	G. Naeyaert (ATSSA)
	B. Shreck	J. Ingle	C&T Staff